



**Washington State
Department of Transportation**

WA-Trans Metadata Standards



Created for the Washington State
Transportation Framework (WA-Trans)

Version 8.0

Last Updated: February 21, 2007

This page left intentionally blank

WA-Trans Data Standards Version 8.0

Metadata Standards

TABLE OF CONTENTS

5.0 METADATA STANDARDS.....	4
INTRODUCTION.....	4
5.1 APPROVED LANGUAGE.....	4
5.2 INTENT	4
5.3 BACKGROUND MATERIALS.....	4
5.4 DEFINITIONS:	4
5.5 MINIMUM REQUIRED METADATA.....	5
5.6 MINIMUM REQUIRED METADATA FOR WA-TRANS INITIAL DATA SUBMISSION (TABLES 1- 3).....	6
5.7 WAGIC BASIC METADATA STANDARD (TABLES 4- 6) A QUALITY GOAL	9
5.8 WORKING SUBSET METADATA STANDARD	10

WA-Trans Data Standards Version 8.0

Metadata Standards

5.0 Metadata Standards

Introduction

There are many approaches for documenting geographic data for archival purposes and day-to day use. Some methods range from informal “read me” files discussing spatial reference information, lineage, and process steps to full FGDC compliant metadata with every field being required and populated. Washington State Geographic Information Council (WAGIC) established metadata standards for “significant geo-datasets” as defined in the Geographic Information Technology Standards for Metadata. This requires the collection and posting of metadata in a specific approved format for an existing or proposed “significant geo-dataset” before December 30, 2004.

5.1 Approved language

It is the policy of WA-TRANS that the completed framework dataset will include metadata that meets the requirements of the Working Subset Metadata Standard of FGDC/CSDGM. There will be fields, such as depth system definition, depth datum name, and raster object information that will not apply to the WA-TRANS, and they will be coded as “N/A” in the completed metadata document. The original metadata schema itself will not be modified to remove these fields.

5.2 Intent

- Geographic data must be properly documented for it to be stored and retrieved without a loss of information.
- WA-TRANS is a very significant geo-dataset that requires proper and as complete documentation as possible

5.3 Background Materials

[Geographic Information Technology Standards for Metadata](#)

“To facilitate implementation of this standard the WAGIC Basic and Working subsets of the FGDC Content Standard for Digital Geospatial Metadata are recognized as an approved implementation pathway.”

[WAGIC Basic Metadata Standard](#)

This is the minimum required documentation to meet the Geographic Information Technology Standard for metadata before December 30, 2004.

[Working Subset Metadata Standard](#) of FGDC / CSDGM.

The Working Subset includes a Basic Subset plus following shaded elements. This is the minimum required documentation to meet the Geographic Information Technology Standard for metadata after 30 Dec, 2004.

5.4 Definitions:

- **Metadata** - "data about data" or "information describing content."
- **WAGIC** - Washington State Geographic Information Council
- **FGDC** - Federal Geographic Data Committee

WA-Trans Data Standards Version 8.0

Metadata Standards

5.5 Minimum Required Metadata

Metadata detailing the characteristics and quality of submitted transportation data must be included with any dataset provided to WA-Trans. There are some minimum metadata elements necessary for WA-Trans to process submitted data. The submitted Metadata should make every effort to meet the rigorous standards detailed above where feasible (See 5.7 and 5.8). Metadata must provide sufficient information to allow the user to determine if the geo-data set will meet the intended purpose, as well as telling the user how to access the data.

The functionality of the WA-Trans Data Provider Interface processes depends upon information contained in the metadata files and in the provider profile. An incomplete metadata file (a metadata file without the minimum required data elements) will reduce application functionality and the initial QA/QC necessary to ensure a useable data submission. To this end WA-Trans will accept Metadata that is not compliant with the standards detailed in section 5.7 and 5.7, but the absolute minimum, which WA-Trans will initially accept, is partially based on the functionality of the WA-Trans Data Provider Interface. To help with application functionality, in addition to the Metadata file a Data Provider Profile will be created.

To be a WA-Trans data provider the provider organization / jurisdiction must complete a Data Provider Profile, which will include many of the elements expected in an FGDC compliant metadata file. The profile will be used during the WA-Trans process of vetting providers who will be approved to contribute and provide information for the WA-Trans Data Provider Interface application to function correctly when data is provided (See Data Provider User Requirements)

The Data Provider Profile will include:

1. Name of the Organization or Jurisdiction,
2. Description of the Organization or Jurisdiction,
3. Organization Address,
4. Contact persons Full Name,
5. Contact persons address and all pertinent contact information (phone, FAX, Email etc),
6. What kind of data will be submitted,
7. What Theme (is this Road data, Rail data, list of all possible approved data themes),
8. Types of files which will be submitted (e.g. Shape, Coverage, CAD),
9. Accuracy of data,
10. Projection (e.g. either Washington State Plane North or Washington State Plane South),
11. Datum (e.g. NAD1983/HARN),
12. Frequency data will be provided

The Data Provider Profile will be in place prior to any data being provided, by that provider, to WA-Trans. This will allow WA-Trans to supplement data into missing elements of an incomplete metadata file. By being able to initially accept incomplete data and metadata into WA-Trans and begin the QA/QC processes, WA-Trans can more effectively work with the provider to help improve their submitted data and metadata quality.

The absolute minimum Metadata standards, for initial submission of data to WA-Trans, are shown in the tables on the following pages.

WA-Trans Data Standards Version 8.0

Metadata Standards

5.6 Minimum Required Metadata for WA-Trans Initial Data Submission (Tables 1- 3)

Element Title		Element Purpose	Minimum Requirements
---------------	--	-----------------	----------------------

Basic WA-Trans Metadata Subset				Table 1
Absolute Minimum Required Subset - shaded areas identify actual data entry elements				
	Element Name	Element Definition	FGDC Hierarchy	sgml tag name
	Identification Information	Basic information about the data set.	1	idinfo
1	Title	The name by which the data set is known	8.4	title
2	Publisher	Name of individual or organization that published the data set	8.8.2	publish
	Description	A characterization of the data set, including its intended use and limitations.	1.2	descript
3	Abstract	A brief narrative summary of the data set. Domain: free text.	1.2.1	abstract
4	Purpose	A summary of the intentions with which the data set was developed. Domain: free text	1.2.2	purpose
	Time Period of Content	Time period(s) for which the data set corresponds to the ground.	1.3	timeperd
	Range of Dates / Times	Means of encoding a range of dates and times.	9.3	rngdates
5	Beginning Date	The first year (and optionally month, or month and day) of the event. Domain: "Unknown" free date	9.3.1	begdate
6	Ending Date	The last year (and optionally month, or month and day) for the event. Domain: "Unknown" "Present" free date	9.3.3	enddate
7	Currentness Reference	The basis on which the time period of content is determined. Domain: "Ground Condition" "Publication Date" free text	1.3.1	current
	Keywords	Words or phrases summarizing an aspect of the data set.	1.6	keywords
	Theme	Subjects covered by the data set	1.6.1	theme
8	Theme Keyword	Common-use word or phrase used to describe the subject of the data set. Domain: free text	1.6.1.2	themekey
	Place	Geographic locations characterized by the data set.	1.6.2	place
9	Place Keyword	The geographic name of a location covered by a data set. Domain: free text	1.6.2.2	placekey
	Data Quality Information	A general assessment of the quality of the data set.	2	dataqual
	Lineage	Information about the events, parameters, and source data, which constructed the data set, and information about the responsible parties.	2.5	lineage
10	Source Information	List of sources and short discussion of the information contributed by each.	2.5.1	srcinfo
11	Source Time Period of Content	Time period(s) for which the source data set corresponds to the ground. Information about the date and time of an event.	2.5.1.4	srctime
	Range of Dates / Times	Means of encoding a range of dates and times.	9.3	rngdates
12	Beginning Date	The first year (an optionally month, or month and day) of the event. Domain: "Unknown" free date	9.3.1	begdate
13	Ending Date	The last year (and optionally month, or month and day) for the event. Domain: "Unknown" "Present" free date	9.3.3	enddate
	Entity and Attribute Information	Information about the content of the data set, including the entities types, their attributes, and the domains from which attribute values may be assigned.	5	eainfo
14	Overview Description	Summary of, and citation to detailed description of, the information content of the data set.	5.2	overview
15	Entity/Attribute Overview	Detailed Summary of the information contained in a data set. Domain: free text	5.2.1	eaover
	Point of Contact / Contact Information	Contact information for an individual or organization that is knowledgeable about the data set. Identity of, and means to communicate with, person(s) and organization(s) associated with the dataset.	10	ptcontac
16	Contact Person	The name of the individual to which the contact type applies. Domain: free text	10.1.1	cntper
17	Contact Organization	The name of the organization to which the contact type applies. Domain: free text	10.1.2	cntorg
18	Contact Position	The title of the individual. Domain: free text	10.3	cntpos
19	Contact Address	The address for the organization or individual.	10.4	cntaddr
20	Address Type	The information provided by the address. Domain: "Mailing Address" "Physical Address" "Mailing and Physical Address"	10.4.1	addrtype
21	Address	An address line for the address. Domain: free text	10.4.2	address
22	City	The city of the address. Domain: free text	10.4.3	city
23	State or Province	The state or province of the address. Domain: free text	10.4.4	state
24	Postal Code	The ZIP or other postal code of the address. Domain: free text	10.4.5	postal
25	Contact Voice Telephone	The telephone number by which individuals can speak to the organization or the individual. Domain: free text	10.5	cntvoice
26	Contact FAX Telephone	The telephone number of a FAX machine of the organization or individual. Domain: free text	10.7	cntfax
27	Contact E-Mail Address	The address of the electronic mailbox of the organization or individual. Domain: free text	10.8	cntemail

WA-Trans Data Standards Version 8.0

Metadata Standards

Element Title

Element Purpose

Minimum Requirements

Working Subset includes Basic Subset plus following shaded elements

Table 2

Element Name	Element Definition	FGDC Hierarchy
Status	The state and maintenance of information for the data set.	1.4
Progress	The state of the data set. Domain: "Complete" "In Work" "Planned"	1.4.1
Maintenance and Update Frequency	The frequency with which changes and additions are made to the data set after the initial data set is completed. Domain: "Continually" "Daily" "Weekly" "Monthly" "Annually" "Unknown" "As Needed" "Irregular" "None Planned" free text	1.4.2
Spatial Domain	The geographic areal domain of the data set.	1.5
Bounding Coordinates	The limits of coverage of a data set expressed by latitude and longitude values in the order western-most, eastern-most, northern-most, and southern-most. For data sets that include a complete band of latitude around the earth, the West Bounding Coordinate	1.5.1
West Bounding Coordinate	Western-most coordinate of the limit of coverage expressed in longitude. Domain: -180.0 <= West Bounding Coordinate < 180.0	1.5.1.1
East Bounding Coordinate	Eastern-most coordinate of the limit of coverage expressed in longitude. Domain: -180.0 <= East Bounding Coordinate < 180.0	1.5.1.2
North Bounding Coordinate	Northern-most coordinate of the limit of coverage expressed in latitude. Domain: -90.0 <= North Bounding Coordinate <= 90.0; North Bounding Coordinate >= South Bounding Coordinate	1.5.1.3
South Bounding Coordinate	Southern-most coordinate of the limit of coverage expressed in latitude. Domain: -90.0 <= South Bounding Coordinate <= 90.0; South Bounding Coordinate <= North Bounding Coordinate	1.5.1.4
Theme Keyword Thesaurus	Reference to a formally registered thesaurus or a similar authoritative source of theme keywords. Domain: "None" free text	1.6.1.1
Place Keyword Thesaurus	Reference to a formally registered thesaurus or a similar authoritative source of place keywords. Domain: "None" "Geographic Names Information System" free text	1.6.2.1
Access Constraints	Restrictions and legal prerequisites for accessing the data set. These include any access constraints applied to assure the protection of privacy or intellectual property, and any special restrictions or limitations on obtaining the data. Domain: "None"	1.7
Use Constraints	Restrictions and legal prerequisites for using the data set after access are granted. These include any access constraints applied to assure the protection of privacy or intellectual property, and any special restrictions or limitations on obtaining the data.	1.8
Attribute Accuracy	An assessment of the accuracy of the identification of entities and assignment of attribute values in a data set.	2.1
Attribute Accuracy Report	An explanation of the accuracy of the identification of the entities and assignments of values in the data set and a description of the tests used. Domain: free text	2.1.1
Positional Accuracy	An assessment of the accuracy of the positions of spatial objects.	2.4
Horizontal Positional Accuracy	An estimate of accuracy of the horizontal positions of the spatial objects.	2.4.1
Horizontal Positional Accuracy Report	An explanation of the accuracy of the horizontal coordinate measurements and a description of the tests used. Domain: free text	2.4.1.1
Vertical Positional Accuracy	An estimate of accuracy of the vertical positions in the data set.	2.4.2
Vertical Positional Accuracy Report	An explanation of the accuracy of the vertical coordinate measurements and a description of the tests used. Domain: free text	2.4.2.1
Source Scale Denominator	The denominator of the representative fraction on a map (for example, on a 1:24,000-scale map, the Source Scale Denominator is 24,000. Domain: Source Scale Denominator > 1	2.5.1.2
Source Contribution	Brief explanation identifying the information contributed by the source to the data set. Domain: free text	2.5.1.6
Spatial Data Organization Information	The mechanism used to represent spatial information in the data set.	3
Direct Spatial Reference Method	The system of objects used to represent space in the data set. Domain: "Point" "Vector" "Raster"	3.2
Raster Object Information	The types and numbers of raster spatial objects in the data set.	3.4 – Not Applicable
Raster Object Type	Raster spatial objects used to locate zero-, one-, and two-, and three-dimensional locations in the data set. Domain: "Point" "Pixel" "Grid Cell" "Voxel"	Not Applicable - 3.4.1
Spatial Reference Information	The description of the reference frame for, and the means to encode, coordinates in the data set.	4
Horizontal Coordinate System Definition	The reference frame or system from which linear or angular quantities are measured and assigned to the position that a point occupies.	4.1
Planer	The quantities of distances or, or distances and angles, which define the position of a point on a reference plane to which the surface of the Earth has been projected.	4.12

WA-Trans Data Standards Version 8.0

Metadata Standards

Element Title

Element Purpose

Minimum Requirements

Working Subset includes Basic Subset plus following shaded elements – cont.
Table 3

	Element Name	Element Definition	FGDC Hierarchy
	Grid Coordinate System	A plane-rectangular coordinate system usually based on, and mathematically adjusted to, a map projection so that geographic positions can be readily transformed to and from plane coordinates.	4.1.2.2
	Grid Coordinate System Name	Name of the grid coordinate system. Domain: A code table	4.1.2.2.1
	State Plane Coordinate System (SPSC)	A plane-rectangular coordinate system established for each state in the United States by the National Geodetic Survey.	4.1.2.2.4
	SPCS Zone Identifier	Identifier for the SPCS zone. Domain: Four-digit numeric code for the State Plane Coordinate Systems based on the North American Datum of 1983 are found in Department of Commerce, 1986, Representation of geographic point locations for information interchange	4.1.2.2.4.1
	Planar Coordinate Information	Information about coordinate system	4.1.2.4
	Planar Distance Units	Units of measure used for distance	4.1.2.4.4
	Geodetic Model	Parameters for the shape of the Earth.	4.1.4
	Horizontal Datum Name	The identification given to the reference system used for defining the coordinates of points. Domain: "North American Datum of 1927" "North American Datum of 1983" free text	4.1.4.1
	Ellipsoid Name	Identification given to established representations of the Earth's shape.	4.1.4.2
	Semi-major Axis	Radius of the equatorial axis of the ellipsoid	4.1.4.3
	Denominator of Flattening Ratio	The denominator of the ratio of the difference between the equatorial and polar radii of the ellipsoid when numerator is set to 1.	4.1.4.4
	Vertical Coordinate System Definition	The reference frame or system from which vertical distances (altitudes or depths) are measured	4.2
	Altitude System Definition	The reference frame or system from which altitudes (elevations) are measured. The term "altitude" is used instead of the common term "elevation" to conform to the terminology in Federal Information Processing Standards 70-1 and 173	4.2.1
	Altitude Datum Name	The identification given to the surface taken as the surface of the reference frame from which altitude is measured	4.2.1.1
	Depth System Definition	The reference frame of system from which depths are measured	4.2.2 – Not Applicable
	Depth Datum Name	The identification given to surface of reference from which depths are measured	Not Applicable - 4.2.2.1
	Detailed Description	Description of the entities, attributes, attribute values, and related characteristics encoded in the data set.	5.1
	Entity Type	The definition and description of a set into which similar entity instances are classified.	5.1.1
	Entity Type Label	The name of the entity type. Domain: free text	5.1.1.1
	Entity Type Definition	The name of the entity type. Domain: free text	5.1.1.2
	Attribute	A define characteristic of an entity.	5.1.2
	Attribute Label	The name of the attribute. Domain: free text	5.1.2.1
	Attribute Definition	The description of the attribute. Domain: free text	5.1.2.2
	Attribute Domain Value	The valid values that can be assigned for an attribute.	5.1.2.4
	Enumerated Domain	The members of an established set of valid values.	5.1.2.4.1
	Enumerated Domain Value	The name or label of a member of the set. Domain: free text	5.1.2.4.1.1
	Enumerated Domain Value Definition	The description of the value. Domain: free text	5.1.2.4.1.2
	Range Domain	The minimum and maximum values of a continuum of valid values.	5.1.2.4.2
	Range Domain Minimum	The least value that the attribute can be assigned. Domain: free text	5.1.2.4.2.1
	Range Domain Maximum	The greatest value that the attribute can be assigned. Domain: free text	5.1.2.4.2.2
	Codeset Domain	Reference to a standard or list that contains the members of an established set of valid values.	5.1.2.4.3
	Codeset Name	The title of the codeset. Domain: free text	5.1.2.4.3.1
	Codeset Source	The authority for the codeset. Domain: free text	5.1.2.4.3.2
	Attribute Units of Measurement	The standard of measurement for an attribute value. Domain: free text	5.1.2.5
	Attribute Measurement Resolution	The smallest unit increment to which an attribute value is measured. Domain: Attribute Measurement Resolution > 0.0	5.1.2.6
	Citation Information	The recommended reference to be used for the data set.	8
	Originator	The name of organization or individual that developed data set.	8.1
	Publication Date	Date dataset published	8.2
	Title	The recommended name of dataset	8.4

WA-Trans Data Standards Version 8.0

Metadata Standards

5.7 WAGIC Basic Metadata Standard (Tables 4- 6) A Quality Goal

Tables 4-7 display the set of elements, which comprise a complete Metadata file and are a quality goal of WA-Trans and are more complete than the Minimum Metadata standards displayed in Tables 1-3.

Element Title

Element Purpose

Minimum
Requirements

ISB / WAGIC - Basic Metadata Subset From FGDC Content Standard for Digital Geospatial Metadata <i>Basic Subset - shaded areas identify actual data entry elements</i>				
Table 4				
	Element Name	Element Definition	FGDC Hierarchy	sgml tag
	Identification Information	Basic information about the data set.	1	idinfo
1	Title	The name by which the data set is known	8.4	title
2	Publisher	Name of individual or organization that published the data set	8.8.2	publish
	Description	A characterization of the data set, including its intended use and limitations.	1.2	descript
3	Abstract	A brief narrative summary of the data set. Domain: free text.	1.2.1	abstract
4	Purpose	A summary of the intentions with which the data set was developed. Domain: free text	1.2.2	purpose
	Time Period of Content	Time period(s) for which the data set corresponds to the ground.	1.3	timeperd
	Range of Dates / Times	Means of encoding a range of dates and times.	9.3	rngdates
5	Beginning Date	The first year (and optionally month, or month and day) of the event. Domain: "Unknown" free date	9.3.1	begdate
6	Ending Date	The last year (and optionally month, or month and day) for the event. Domain: "Unknown" "Present" free date	9.3.3	enddate
7	Currentness Reference	The basis on which the time period of content is determined. Domain: "Ground Condition" "Publication Date" free text	1.3.1	current
	Keywords	Words or phrases summarizing an aspect of the data set.	1.6	keywords
	Theme	Subjects covered by the data set	1.6.1	theme
8	Theme Keyword	Common-use word or phrase used to describe the subject of the data set. Domain: free text	1.6.1.2	themekey
	Place	Geographic locations characterized by the data set.	1.6.2	place
9	Place Keyword	The geographic name of a location covered by a data set. Domain: free text	1.6.2.2	placekey
	Data Quality Information	A general assessment of the quality of the data set.	2	dataqual
	Lineage	Information about the events, parameters, and source data, which constructed the data set, and information about the responsible parties.	2.5	lineage
10	Source Information	List of sources and short discussion of the information contributed by each.	2.5.1	srcinfo
11	Source Time Period of Content	Time period(s) for which the source data set corresponds to the ground. Information about the date and time of an event.	2.5.1.4	srctime
	Range of Dates / Times	Means of encoding a range of dates and times.	9.3	rngdates
12	Beginning Date	The first year (an optionally month, or month and day) of the event. Domain: "Unknown" free date	9.3.1	begdate
13	Ending Date	The last year (and optionally month, or month and day) for the event. Domain: "Unknown" "Present" free date	9.3.3	enddate
	Entity and Attribute Information	Information about the content of the data set, including the entities types, their attributes, and the domains from which attribute values may be assigned.	5	eainfo
14	Overview Description	Summary of, and citation to detailed description of, the information content of the data set.	5.2	overview
15	Entity/Attribute Overview	Detailed Summary of the information contained in a data set. Domain: free text	5.2.1	eaover
	Point of Contact / Contact Information	Contact information for an individual or organization that is knowledgeable about the data set. Identity of, and means to communicate with, person(s) and organization(s) associated with the dataset.	10	ptcontac
16	Contact Person	The name of the individual to which the contact type applies. Domain: free text	10.1.1	cntper
17	Contact Organization	The name of the organization to which the contact type applies. Domain: free text	10.1.2	cntorg
18	Contact Position	The title of the individual. Domain: free text	10.3	cntpos
19	Contact Address	The address for the organization or individual.	10.4	cntaddr
20	Address Type	The information provided by the address. Domain: "Mailing Address" "Physical Address" "Mailing and Physical Address"	10.4.1	addrtype
21	Address	An address line for the address. Domain: free text	10.4.2	address
22	City	The city of the address. Domain: free text	10.4.3	city
23	State or Province	The state or province of the address. Domain: free text	10.4.4	state
24	Postal Code	The ZIP or other postal code of the address. Domain: free text	10.4.5	postal
25	Contact Voice Telephone	The telephone number by which individuals can speak to the organization or the individual. Domain: free text	10.5	cntvoice
26	Contact FAX Telephone	The telephone number of a FAX machine of the organization or individual. Domain: free text	10.7	cntfax
27	Contact E-Mail Address	The address of the electronic mailbox of the organization or individual. Domain: free text	10.8	cntemail

WA-Trans Data Standards Version 8.0

Metadata Standards

5.8 Working Subset Metadata Standard

INFORMATION SERVICE BOARD METADATA STANDARD – APPENDIX A
APPROVED WORKING LEVEL SUBSET OF FGDC/CSDGM
(FEBRUARY 6TH 2003)

Element Title		Element Purpose	Minimum Requirements
---------------	--	-----------------	----------------------

Working Subset includes Basic Subset plus following shaded elements			Table 5
Element Name	Element Definition	FGDC Hierarchy	
Status	The state and maintenance of information for the data set.	1.4	
Progress	The state of the data set. Domain: "Complete" "In Work" "Planned"	1.4.1	
Maintenance and Update Frequency	The frequency with which changes and additions are made to the data set after the initial data set is completed. Domain: "Continually" "Daily" "Weekly" "Monthly" "Annually" "Unknown" "As Needed" "Irregular" "None Planned" free text	1.4.2	
Spatial Domain	The geographic areal domain of the data set.	1.5	
Bounding Coordinates	The limits of coverage of a data set expressed by latitude and longitude values in the order western-most, eastern-most, northern-most, and southern-most. For data sets that include a complete band of latitude around the earth, the West Bounding Coordinate	1.5.1	
West Bounding Coordinate	Western-most coordinate of the limit of coverage expressed in longitude. Domain: -180.0 <= West Bounding Coordinate < 180.0	1.5.1.1	
East Bounding Coordinate	Eastern-most coordinate of the limit of coverage expressed in longitude. Domain: -180.0 <= East Bounding Coordinate < 180.0	1.5.1.2	
North Bounding Coordinate	Northern-most coordinate of the limit of coverage expressed in latitude. Domain: -90.0 <= North Bounding Coordinate <= 90.0; North Bounding Coordinate >= South Bounding Coordinate	1.5.1.3	
South Bounding Coordinate	Southern-most coordinate of the limit of coverage expressed in latitude. Domain: -90.0 <= South Bounding Coordinate <= 90.0; South Bounding Coordinate <= North Bounding Coordinate	1.5.1.4	
Theme Keyword Thesaurus	Reference to a formally registered thesaurus or a similar authoritative source of theme keywords. Domain: "None" free text	1.6.1.1	
Place Keyword Thesaurus	Reference to a formally registered thesaurus or a similar authoritative source of place keywords. Domain: "None" "Geographic Names Information System" free text	1.6.2.1	
Access Constraints	Restrictions and legal prerequisites for accessing the data set. These include any access constraints applied to assure the protection of privacy or intellectual property, and any special restrictions or limitations on obtaining the data. Domain: "None"	1.7	
Use Constraints	Restrictions and legal prerequisites for using the data set after access are granted. These include any access constraints applied to assure the protection of privacy or intellectual property, and any special restrictions or limitations on obtaining the data	1.8	
Attribute Accuracy	An assessment of the accuracy of the identification of entities and assignment of attribute values in a data set.	2.1	
Attribute Accuracy Report	An explanation of the accuracy of the identification of the entities and assignments of values in the data set and a description of the texts used. Domain: free text	2.1.1	
Positional Accuracy	An assessment of the accuracy of the positions of spatial objects.	2.4	
Horizontal Positional Accuracy	An estimate of accuracy of the horizontal positions of the spatial objects.	2.4.1	
Horizontal Positional Accuracy Report	An explanation of the accuracy of the horizontal coordinate measurements and a description of the tests used. Domain: free text	2.4.1.1	
Vertical Positional Accuracy	An estimate of accuracy of the vertical positions in the data set.	2.4.2	
Vertical Positional Accuracy Report	An explanation of the accuracy of the vertical coordinate measurements and a description of the tests used. Domain: free text	2.4.2.1	
Source Scale Denominator	The denominator of the representative fraction on a map (for example, on a 1:24,000-scale map, the Source Scale Denominator is 24,000. Domain: Source Scale Denominator > 1	2.5.1.2	
Source Contribution	Brief explanation identifying the information contributed by the source to the data set. Domain: free text	2.5.1.6	
Spatial Data Organization Information	The mechanism used to represent spatial information in the data set.	3	
Direct Spatial Reference Method	The system of objects used to represent space in the data set. Domain: "Point" "Vector" "Raster"	3.2	
Raster Object Information	The types and numbers of raster spatial objects in the data set.	3.4 – Not Applicable	
Raster Object Type	Raster spatial objects used to locate zero-, one-, and two-, and three-dimensional locations in the data set. Domain: "Point" "Pixel" "Grid Cell" "Voxel"	Not Applicable - 3.4.1	
Spatial Reference Information	The description of the reference frame for, and the means to encode, coordinates in the data set.	4	
Horizontal Coordinate System Definition	The reference frame or system from which linear or angular quantities are measured and assigned to the position that a point occupies.	4.1	
Planar	The quantities of distances or, or distances and angles, which define the position of a point on a reference plane to which the surface of the Earth has been projected.	4.1.2	

WA-Trans Data Standards Version 8.0

Metadata Standards

Working Subset includes Basic Subset plus following shaded elements – cont. Table 6

Element Name	Element Definition	FGDC Hierarchy
Grid Coordinate System	A plane-rectangular coordinate system usually based on, and mathematically adjusted to, a map projection so that geographic positions can be readily transformed to and from plane coordinates.	4.1.2.2
Grid Coordinate System Name	Name of the grid coordinate system. Domain: A code table	4.1.2.2.1
State Plane Coordinate System (SPSC)	A plane-rectangular coordinate system established for each state in the United States by the National Geodetic Survey.	4.1.2.2.4
SPCS Zone Identifier	Identifier for the SPCS zone. Domain: Four-digit numeric code for the State Plane Coordinate Systems based on the North American Datum of 1983 are found in Department of Commerce, 1986, Representation of geographic point locations for information interchange	4.1.2.2.4.1
Planar Coordinate Information	Information about coordinate system	4.1.2.4
Planar Distance Units	Units of measure used for distance	4.1.2.4.4
Geodetic Model	Parameters for the shape of the Earth.	4.1.4
Horizontal Datum Name	The identification given to the reference system used for defining the coordinates of points. Domain: "North American Datum of 1927" "North American Datum of 1983" free text	4.1.4.1
Ellipsoid Name	Identification given to established representations of the Earth's shape.	4.1.4.2
Semi-major Axis	Radius of the equatorial axis of the ellipsoid	4.1.4.3
Denominator of Flattening Ratio	The denominator of the ratio of the difference between the equatorial and polar radii of the ellipsoid when numerator is set to 1.	4.1.4.4
Vertical Coordinate System Definition	The reference frame or system from which vertical distances (altitudes or depths) are measured	4.2
Altitude System Definition	The reference frame or system from which altitudes (elevations) are measured. The term "altitude" is used instead of the common term "elevation" to conform to the terminology in Federal Information Processing Standards 70-1 and 173	4.2.1
Altitude Datum Name	The identification given to the surface taken as the surface of the reference frame from which altitude is measured	4.2.1.1
Depth System Definition	The reference frame of system from which depths are measured	4.2.2 – Not Applicable
Depth Datum Name	The identification given to surface of reference from which depths are measured	Not Applicable - 4.2.2.1
Detailed Description	Description of the entities, attributes, attribute values, and related characteristics encoded in the data set.	5.1
Entity Type	The definition and description of a set into which similar entity instances are classified.	5.1.1
Entity Type Label	The name of the entity type. Domain: free text	5.1.1.1
Entity Type Definition	The name of the entity type. Domain: free text	5.1.1.2
Attribute	A define characteristic of an entity.	5.1.2
Attribute Label	The name of the attribute. Domain: free text	5.1.2.1
Attribute Definition	The description of the attribute. Domain: free text	5.1.2.2
Attribute Domain Value	The valid values that can be assigned for an attribute.	5.1.2.4
Enumerated Domain	The members of an established set of valid values.	5.1.2.4.1
Enumerated Domain Value	The name or label of a member of the set. Domain: free text	5.1.2.4.1.1
Enumerated Domain Value Definition	The description of the value. Domain: free text	5.1.2.4.1.2
Range Domain	The minimum and maximum values of a continuum of valid values.	5.1.2.4.2
Range Domain Minimum	The least value that the attribute can be assigned. Domain: free text	5.1.2.4.2.1
Range Domain Maximum	The greatest value that the attribute can be assigned. Domain: free text	5.1.2.4.2.2
Codeset Domain	Reference to a standard or list that contains the members of an established set of valid values.	5.1.2.4.3
Codeset Name	The title of the codeset. Domain: free text	5.1.2.4.3.1
Codeset Source	The authority for the codeset. Domain: free text	5.1.2.4.3.2
Attribute Units of Measurement	The standard of measurement for an attribute value. Domain: free text	5.1.2.5
Attribute Measurement Resolution	The smallest unit increment to which an attribute value is measured. Domain: Attribute Measurement Resolution > 0.0	5.1.2.6
Citation Information	The recommended reference to be used for the data set.	8
Originator	The name of organization or individual that developed data set.	8.1
Publication Date	Date dataset published	8.2
Title	The recommended name of dataset	8.4